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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WEATHERBY, ELLSWORTH	
ART UNIT	PAPER NUMBER
3768	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,733	JANSEN, HERBERT ANDRE	
	Examiner	Art Unit	
	ELLSWORTH WEATHERBY	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-5 and 9-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-5 and 9-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/12/2008 has been entered.

Claim Objections

2. Claims 11-13 objected to because of the following informalities: Regarding claims 11-12, these claims include the limitation, “interaction signal”. However, the Independent Claim 15, from which claims 11-12 depend, refers to a “discrete interaction signal”. Applicant should use consistent terminology. Regarding claim 13, this claim includes the limitation, “the interaction response”. However, the Independent Claim 15, from which claim 11 depends, claims “responding to the discrete...". Here, the claimed “the interaction response” does not have proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 2-5, 9-10, and 14-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claims 2-5, 9-10 and 16, there is not sufficient written description for the term, “indexed position”. That is, the Examiner is unable to find the term "indexed position" anywhere in the specification. Regarding claims 14-15, there is not sufficient written description for the term, “discrete interaction signal”. That is, the Examiner is unable to find the term "discrete interaction signal" anywhere in the specification.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2-5, 9-10, and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 2-5, 9-10 and 16, the claim limitation, “indexed position” is not clear. Regarding claims 14-15, the claim limitation, “discrete interaction signal” is not clear.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 2-5 and 9-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Franck et al. (USPN 6,529,765).

Regarding claims 2-5 and 16, Franck et al. '765 (hereinafter Franck) teaches a passive optical interface apparatus for tracking by a tracking system of an object in space for position and orientation and for interacting with the tracking system (abstract), the passive optical interface apparatus comprising: at least three passive detectable devices trackable for position by the tracking system and a mounting device for receiving the at least three passive detectable (fig. 5, ref. 510,550,570,572) devices in a known geometry and adapted for being secured to the object such that a position and orientation of the object is calculable by the tracking system as a function of a tracking of the known geometry of the passive detectable devices (fig. 2; col. 5, ll. 24-67; col. 6, ll. 1-3), at least a first of the passive detectable devices being secured to the mounting device by a joint, the joint operative connecting said first of the at least three passive detectable devices for movement between a first indexed position and a second

indexed position with respect to the object, a displacement of said first of the passive detectable devices with respect to the object being detectable to initiate an interaction with the tracking system while maintaining the tracking of the object (col. 5, l. 50- col. 6, l. 36; col. 16, ll. 7-34; Fig. 16). Franck further teaches that the apparatus comprises four of the passive detectable devices trackable for position by the tracking system (fig. 5, ref. 510,550,570,572), a second, a third and a fourth of the four passive detectable devices being positioned in said known geometry and the first of the four passive detectable devices being displaceable with respect to the known geometry (col. 5, l. 50- col. 6, l. 36), a displacement of any of the four passive detectable devices with respect to the known geometry being detectable to initiate an interaction with the tracking system and measured as changes in the segment lengths between the markers (col. 5, l. 50- col. 6, l. 36; col. 9, ll. 39-56; col. 16, ll. 7-34). Franck further teaches that each of the markers are measurable such that with any displacement the device's position and pose can be measured (col. 4, ll. 1-16)

9. Regarding claims 9-15, Franck teaches a method for interaction between a tracking system tracking a position and orientation of an object in space and a handler of the object, the object having at least three passive detectable devices with at least one of said at least three passive detectable devices being displaceable with respect to the object so as to define at least two detectable geometrical patterns (col. 5, l. 50- col. 6, l. 36), and comprising the steps of: tracking a position and orientation of the at least three passive detectable devices for calculating a position and orientation of the object

as a function of the position and orientation of any one of the detectable geometrical patterns of at least three passive detectable devices and interpreting the position and orientation of the at least three passive detectable devices as a continuous or discrete input for calculating for calculating a position and orientation the object (col. 5, l. 50- col. 6, l. 36; col. 9, ll. 39-56; col. 16, ll. 7-34); interpreting a displacement of said at least one of said at least three passive detectable devices with respect to the object as a discrete interaction signal from the handler (col. 5, l. 50- col. 6, l. 36; col. 9, ll. 39-56; col. 16, ll. 7-34); and responding to the interaction signal by initiating an interaction response to the handler (col. 16, ll. 26-35). Franck further teaches that the apparatus comprises four of the passive detectable devices trackable for position by the tracking system (fig. 5, ref. 510,550,570,572), a second, a third and a fourth of the four passive detectable devices being positioned in said known geometry and the first of the four passive detectable devices being displaceable with respect to the known geometry (col. 5, l. 50- col. 6, l. 36). Franck also teaches that the change is an indexed displacement of a first of the passive detectable devices between a first and a second position, the detectable device having four of the passive detectable devices, with the first geometrical pattern being a second, a third and a fourth of the passive detectable devices in a known geometry and the first of the passive detectable devices in the first position with respect to the known geometry, and with the second geometrical pattern being the second, the third and the fourth of the passive detectable devices in the known geometry and the first of the passive detectable devices being in the second position with respect to the known geometry, the known geometry being fixed to the object such that the position and

orientation of the object is calculated as a function of the position and orientation of the known geometry (col. 5, l. 50- col. 6, l. 36; col. 6, ll. 45-67; col. 13, ll. 53-59; Fig. 16). Franck further teaches that each of the markers are measurable such that with any displacement the device's position and orientation can be measured (col. 4, ll. 1-16).

Response to Arguments

10. Applicant's arguments filed 12/12/2008 have been fully considered but they are not persuasive.

11. Applicant argues that the 12/12/2008 amendment overcomes the 35 USC 102(e) rejection of the by Franck et al. The Examiner acknowledges Applicant's argument that the Franck et al. patent teaches a system for determining the spatial position and orientation of a body. Claim 2 as amended includes the limitation, "indexed position". Here, Applicant asserts that the indexed positions are precisely known with respect to the object. However, the Examiner stands that the claim limitation, "indexed position" is broad and undefined and furthermore, not disclosed in the specification. Therefore, the term "indexed" is interpreted by the Examiner in a manner which is consistent with it's definition by the Merriam-Webster Dictionary. Accordingly, the limitation *indexed position* does not exclude Franck which includes an index of position (Fig. 16; ref. 1335). That is, absent any further limitations regarding the "indexed position", the position index 1335 or, the end points of the translation stage, or even the arbitrary increments of Franck could satisfy the limitation "indexed position".

12. Applicant further alleges that Franck et al. fails to teach "*the joint operatively connecting said at least a first of at least three passive detectable devices between a first indexed position and a second indexed position*". Here, the examiner stands that an express disclosure of "the joint" is not detailed by the current specification. Accordingly, the Examiner stands that the claimed "the joint" does not exclude the translation mechanism of Franck, which operatively connects detectable elements 730 and 742 for translation between a first and second indexed position [Fig. 16].

13. Applicant further alleges that Franck et al. fails to disclose the step of "interpreting a displacement of said at least one of said at least passive detectable devices with respect to the object as a discrete input from the handler". Here the Examiner stands that the claim limitation, "discrete input" is not expressly disclosed by the current specification. Accordingly, the term "discrete" is interpreted by the examiner in a manner which is consistent with it's definition by the Merriam-Webster Dictionary. Therein, the term discrete includes "taking on or having a finite or countably infinite number of values". Here, the examiner stands that the input by the operator of system or method of Franck et al. would be countably recorded by the index 1335 or as a minute increment of detectable element 742 within the constrained translation range of Franck et al. (Fig. 16).

14. Accordingly and because Applicant has not set forth any further arguments regarding the application of Franck et al. as prior art under 35 USC 102(e), claims 2-5 and 9-16 stand rejected on the grounds set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLSWORTH WEATHERBY whose telephone number is (571) 272-2248. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/EW/

/Long V Le/
Supervisory Patent Examiner, Art Unit 3768